Test (1)

1 **First: Complete the following:**

1. 3.4 x .... = 3,400
2. .... x 30 = 2,400
3. 36 x 25 = ...
4. 2.83 x 0.2 = ...
5. (400 x 0.7) – 250 = ...
6. 5,600 = (70 x 40) + 140 x ....

Second: Choose the correct answer:

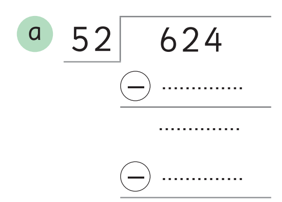
1. 0.4 x .... = 40.0
   (a) 10 (b) 100 (c) 1,000 (d) 10,000
2. 9,600 ÷ 100 = ...
   (a) 9.6 (b) 96 (c) 0.96 (d) 690

2 **Compare by using (<), (>) or (=):**

1. 360 ÷ 4 ◯ 1,800 ÷ 20
2. 5,700 ÷ 57 ◯ 1,000
3. 9,600 ÷ 480 ◯ 40 ÷ 0.5
4. 2.56 ÷ 16 ◯ 1.6

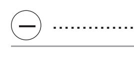
3 **Find the quotient and the remainder (if any) for each of the following:**

(a) 52 ⟌ 624



The quotient = ...

(b) 32 ⟌ 6,880



The quotient = ...

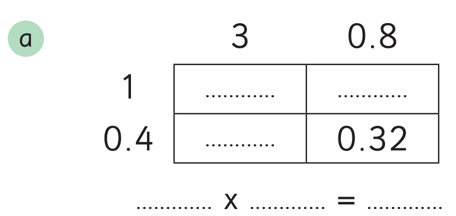
(c) 15 ⟌ 4,817

The quotient = ...
The remainder = ...

4 **If the price of 74 notebooks is 1,036 pounds, what is the price of 25 notebooks of the same kind?**

5 **Complete the missing numbers in the following area models, then find the product that each model represents.**

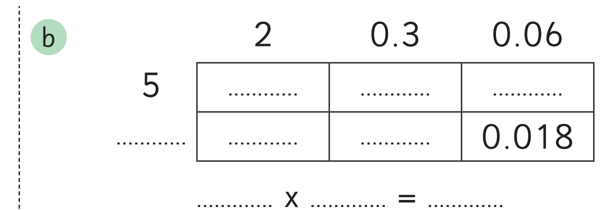
(a)



	3	0.8
1	....	....
0.4	....	0.32

.... x .... = ...

(b)



	2	0.3	0.06
5	....	....	....
....	....	....	0.018

.... x .... = ...

Test (2)

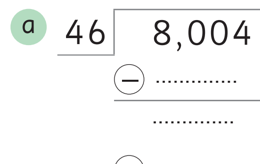
1 **First: The product of 16 x 7 = 112, so find the product of the following:**

1. 16 x 0.7 = ...
2. 0.16 x 700 = ...
3. 1.6 x 7 = ...
4. 1,600 x 0.07 = ...
5. 16 x 70 = ...
6. 1.6 x 0.7 = ...

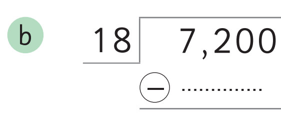
Second: Complete the following:

a. 3.6 kilograms = ... grams
b. 7,900 cm = ... decimeters
c. 850 meters = ... kilometers
d. 2,700 millimeters = ... decimeters

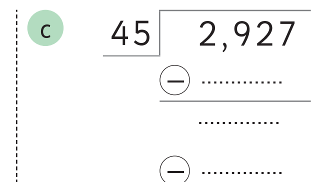
2 **Find the quotient and the remainder (if any) for each of the following by using the standard algorithm:**

a. 

The quotient = ...

b. 

The quotient = ...

c. 

The quotient = ...
The remainder = ...

3 **Complete the following:**

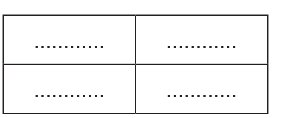
a. If any decimal number is multiplied by 10, the decimal point moves .... (right or left)

b. If any decimal number is multiplied by 0.01, the decimal point moves .... left.

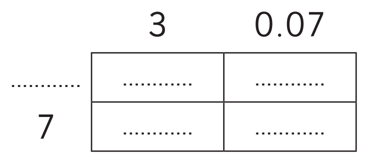
c. The estimation of the quotient 3,540 ÷ 35 is ....

4 **Find the product of multiplication by using the area model:**

a. 
2.3 x 45



b. 47 x 3.07



5 Maryam's family saved money to spend a 5-day vacation in Sharm El-Sheikh and they had two hotels to choose between them. The cost of one night in the first hotel is 3,450 pounds, while the cost of one night in the second hotel is 4,275 pounds. If the family's budget is 20,000 pounds, in which hotel can they spend their vacation? How much will they pay for the hotel they have chosen?

Test (3)

1 **First: Choose the correct answer:**

1. 2.515 x 0.2 = ...
   - a) 0.0503
   - b) 5.0300
   - c) 0.503
   - d) 50.3
2. 1.4076 ÷ 0.23 = ...
   - a) 61.2
   - b) 6.12
   - c) 0.612
   - d) 612

Second: Find the product of the following by using the standard algorithm:

1. 3.56 x 0.1 = ...
2. 0.75 x 2.4 = ...

2 **First: Complete the following:**

1. 317.62 – 58.017 = ...
2. 9.42 x .... = 0.942

Second: Which model of the following matches the multiplication algorithm 2,050 x 34:

a)

	2,000	50
3	6,000	150
4	8,000	200

b)

	20	5
30	600	150
4	80	15

c)

	2,000	50
30	60,000	1,500
4	8,000	200

d)

	2	5
30	60	150
4	8	20

3 **Put (>), (<) or (=):**

1. 37.9 + 2.3 ◯ 41.7 – 1.3
2. 1 + 0.973 ◯ 58.003 – 57.03
3. 43.5 x 0.4 ◯ 8.7 ÷ 0.5
4. 97.2 ÷ 8.1 ◯ 14.4 ÷ 12

4 **Find the quotient by using the area model:**

ⓐ 22.05 ÷ 7 = ...

	....	0.1	....
7	22.05 ⊖ 21	1.05 ⊖	0.35 ⊖ ....
	....	....	....

22.05 ÷ 7 = ... + ... + ... = ...

ⓑ 371.2 ÷ 3.2 = ...

	....	....	....
32	3,712 ⊖	.... ⊖ 320	.... ⊖ 192
	512	....	0

371.2 ÷ 3.2 = ... + ... + ... = ...

5 The distance between Cairo and Sharm El-Sheikh is 540 kilometers, and the car covered it in 3 parts. In the first part, it covered 130 kilometers, and in the second part, it covered 98 kilometers. What is the distance it will cover in the third part?

Test (4)

1 **Complete the following:**

1. If the value of the digit 5 is 0.05, the place value of the digit 5 is ....
2. If y + 3.16 = 2.9 + 5.73, so y = ...
3. 32.547 ≈ .... (To the nearest Hundredth)

2 **Find the product, then match it to its equivalent.**

3.025 x 42 = ...	127.5	98.4 + 28.95 = ...
1912.5 ÷ 15 = ...	127.35	237 – 109.95 = ...
8.49 x 15 = ...	127.05	1,275 x 0.1 = ...

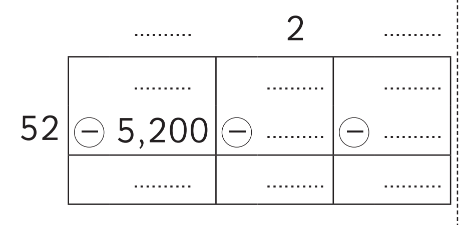
3 **Complete by using the area model:**

	80	9
20	1,600	180
7	560	63

27 x 89 = (.......... x ....) + (.......... x ....) + (.......... x ....) + (.......... x ....)

4 **Complete the missing numbers, then find the quotient:**

ⓐ 5,382 ÷ 52 = ...



	....	2	....
	....	....	....
52	⊖ 5,200	⊖	⊖ ....
	....	....	....

5,382 ÷ 52 = ... + ... + ...

= 100 + ... + 1 = ...

(The remainder is 26)

ⓑ 9,234 ÷ 81 = ...

	....	....	....	....
	9,234	1,134	....	....
81	⊖	⊖	⊖ 162	⊖ ....
	....	324	162	0

9,234 ÷ 81 = ... + ... + ... = ...

5 Murad's step length is 6.9 decimeters. What is the distance that he will walk (in meters) after taking 1,000 steps?

Test (5)

1 **First: Choose two reasonable estimations for the product of 208 x 32 from the following equations:**

① 200 x 30 = 6,000

② 210 x 30 = 6,300

③ 200 x 35 = 7,000

④ 210 x 35 = 7,350

Second: Which of the following estimation strategies is to estimate the result of multiplying 345 x 82 if the estimation is 28,000:

ⓐ Using the strategy of estimating the number through the first digit from the left.

ⓑ Rounding each number to the nearest Ten.

ⓒ Rounding each number to its greatest place value.

ⓓ Rounding each number to the nearest Hundred.

2 Use the standard algorithm to find the product of the following by placing each product from the answer bank in the correct column of the following table. One product will remain:

67 ⓧ 25	23 ⓧ 55	45 ⓧ 33
....	....	....

Answer Bank
1,265
1,485
1,535
1,675

3 When multiplying a one-digit whole number by 10,000 the place value of the number changes:

From:	Ten Thousands	Hundreds	Tens	Ones
To:	Ten Thousands	Hundreds	Tens	Ones

4 A merchant bought 20 boxes of tangerines for 1,780 pounds, and sold all the boxes for 150 pounds each. The merchant followed the steps below to find out what he earned:

1. He solved the equation 20 x 150 = y
2. He calculated the product 1,780 + y
3. He found out that he earned 4,780 pounds. Is there a mistake in the merchant's solution? What is it?

   a. In step 1: He should have divided the numbers instead of multiplying them.
   b. In step 2: He should have subtracted the values instead of adding them.
   c. In step 3: The merchant made a mistake in addition when he calculated his profit.
   d. The merchant didn't make any mistake.

5 First: Use the area model to find the products of the following:

a) 7 x 5.8 = ...

....	....

b) 3.8 x 35 = ...

....	....
....	....

Second: Use the standard algorithm to find the products of the following:

a)
```
   2.7
 x 5.4
 -----
 .........
```

b)
```
   2.05
 x   52
 ------
 .........
```

c)
```
   54.23
 x   5.4
 -------
 .........
```

Answers

Test 1

1 First: (1) 1,000 (2) 80 (3) 900 (4) 0.566 (5) 280 – 250 = 30 (6) 20

Second: (1) b (2) b

2 (1) = (2) < (3) < (4) <

3 a) 12 b) 215 c) 321 (The Remainder is 2)

4 The price of the notebook: 1,036 ÷ 74 = 14 pounds

The price of 25 notebooks = 25 x 14 = 350 pounds

5 a)

	3	0.8
1	3	0.8
0.4	1.2	0.32

1.4 × 3.8 = 5.32

b)

	2	0.3	0.06
5	10	1.5	0.30
0.3	0.6	0.09	0.018

5.3 × 2.36 = 12.508

Test 2

1 First: (1) 11.2 (2) 112 (3) 11.2 (4) 112 (5) 1,120 (6) 1.12

Second: (a) 3.600 (b) 790 (c) 0.85 (d) 27

2 (a) 174 (b) 400 (c) 65 (The Remainder is 2)

3 (a) right (b) two places (c) 100

4 (a)

	40	5
2	80	10
0.3	12	1.5

$2.3 \times 45 = 103.5$

(b)

	3	0.07
40	120	2.8
7	21	0.49

$47 \times 3.07 = 144.29$

5 The first hotel, the cost = 17,250 pounds

Test 3

1 First: (1) c (2) b

Second: (1) 0.356 (2) 1.8

2 First: (1) 259.603 (2) 18

Second: c

3 (1) < (2) > (3) = (4) >

4 (a) 3.15 (b) 116

5 312 km

Test 4

1 (a) hundredth (b) $y = 5.47$ (c) 32.55

2 $3.025 \times 42 = 127.05 = 237 - 109.95$, $4.49 \times 15 = 127.35 = 98.4 + 28.95$

$1912.5 \div 15 = 127.5 = 1.275 \times 0.1$

3 $27 \times 89 = (20 \times 80) + (20 \times 9) + (7 \times 80) + (7 \times 9)$

4 (a) 103 (The Remainder is 26) (b) 114

5 $0.69 \times 1,000 = 690$ meters

Test 5

1 First: (1) , (2)

Second: (b)

2 1,675 , 1,265 , 1,485

3 From Ones to Ten Thousands

4 (b)

5 First: (a) 40.6 (b) 133

Second: (a) 14.58 (b) 106.6 (c) 292.842

Concept (3-1)
Models for Multiplication

Lesson (1): The Power of Ten:

Jumping by Powers of Ten Solve.

1. $8 \times$ ______ $= 8{,}000$

2. $3 \times 10{,}000 =$ ______

3. ______ $\times 9 = 900$

4. $2 \times$ ______ $= 200{,}000$

5. $1{,}000 \times 6 =$ ______



Matching Expressions Choose from the given expressions to enter the one that is equal to the number.

5×100	10×5	$100{,}000 \times 5$	$5 \times 1{,}000$	$5 \times 10{,}000$

A. 50,000 ______

B. 500 ______

C. 5,000 ______

D. 50 ______

E. 500,000 ______



1. A crate of mangoes weighs 9 kilograms. How many kilograms would 1,000 crates weigh?



Use basic facts and patterns to find each product.

a. $3 \times 1 =$ ☐
$3 \times 10 =$ ☐
$3 \times 100 =$ ☐
$3 \times 1,000 =$ ☐
$3 \times 10,000 =$ ☐

b. $14 \times 1 =$ ☐
$14 \times 10 =$ ☐
$14 \times 100 =$ ☐
$14 \times 1,000 =$ ☐
$14 \times 10,000 =$ ☐

c. $50 \times 1 =$ ☐
$50 \times 10 =$ ☐
$50 \times 100 =$ ☐
$50 \times 1,000 =$ ☐
$50 \times 10,000 =$ ☐



Fill in the blanks below.

a. 5 cm = ________ mm

b. 2 kg = ________ g

c. 7 L = ________ mL

d. 6 m = ________ cm

e. 10 km = ________ meters

f. 9 kilometers = ________ cm



Lesson (2): Using the Area Model to Multiply:

Multiplying Tens How many times will 10 need to be multiplied by itself to equal each given number?

1. 100
2. 1,000
3. 10,000
4. 100,000



Whiteboard: Expanding Equations Work with your teacher and classmates to create area models and find each product.

1. $374 \times 62 =$ ______________

2. $506 \times 42 =$ ______________

374×62

		70	
2		140	8

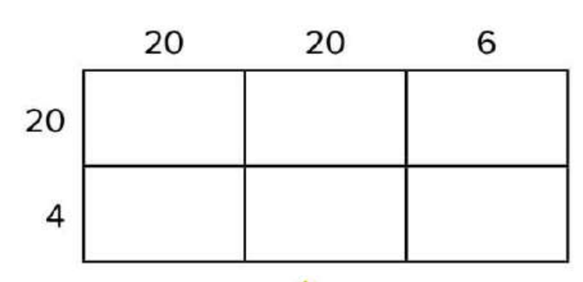
506×42



Decompose with Area Model Eman is planting a garden. She wants to find the area of the garden to know how much topsoil she will need. The garden is 46 meters long and 24 m wide. How many different ways can you decompose the numbers to help her find the area?

$46 \times 24 =$ ______________

Example:





Complete each of the following area models.

a.

	30	8
10		
6		

b.

	50	4
20		
3		



c.

	100	70	5
80			
2			

d.

	300	60	1
50			
6			



Lesson (3): The Distributive Property of Multiplication:

Use the Distributive Property of Multiplication and area model to find the product of each of the following.

a. 14 × 27 = ______

(10 × 20) + (10 × ___) + (___ × 20) + (4 × ___) = ______

	20	7
10	200	70
4	80	28



58 × 42 = ______

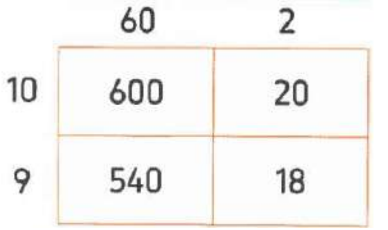
(40 × ___) + (40 × 8) + (___ × 50) + (2 × ___) = ______

	50	8
40	2,000	320
2	100	16



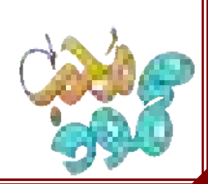
19 × 62 = ______

(10 × ___) + (___ × 2) + (___ × 60) + (9 × ___) = ______



	60	2
10	600	20
9	540	18





Lesson (4): Using the Partial Products Model to Multiply:

Find the product using the partial products.

a.

$$\begin{array}{r} 45 \\ \times\ 72 \\ \hline \end{array}$$

____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
____

b.

$$\begin{array}{r} 564 \\ \times\ 35 \\ \hline \end{array}$$

____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
\+ ____ ← [___ × ___]
____



Homework

2. If 10 millimeters makes 1 centimeter, how many millimeters are in 7 centimeters?



3. There are 1,000 milliliters in 1 liter. Omar bought a 2-liter bottle of juice. How many milliliters are in the bottle?



4. Aya ran a 5-kilometer race on Saturday. If there are 1,000 meters in 1 kilometer, how many meters did she run?





Find each product of the following.

a. 3 × 10 = ____

b. 6 × 100 = ____

c. 1,000 × 6 = ____

d. 3 × 10,000 = ____

e. 2 × 100,000 = ____

f. 10,000 × 5 = ____

g. 10 × 18 = ____

h. 30 × 100 = ____

i. 13 × 1,000 = ____

j. 70 × 10,000 = ____

k. 100 × 12 = ____

l. 60 × 1,000 = ____

m. 15 × 100,000 = ____

n. 80 × 100,000 = ____



Fill in the blanks below.

a. 7 cm = ____ mm

b. 3 km = ____ m

c. 8 L = ____ mL

d. 9 m = ____ cm

e. 5 kg = ____ g

f. 20 L = ____ mL

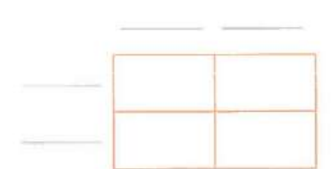
g. 7 km = ____ cm

h. 50 m = ____ mm

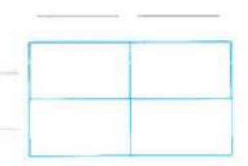


Expanding Equations. Create an area model for each of the following problems and find each product.

a. 21 × 64 = ____



b. 103 × 72 = ____





(20 × 30) + (__ × __) + (__ × __) + (4 × 7) = ____

	30	7
20	600	140
4	120	28





Complete the area model and evaluate.

a. (50 × 30) + (50 × 4) + (7 × 30) + (7 × 4) = ...

	30	4
50	....	200
....	210	....

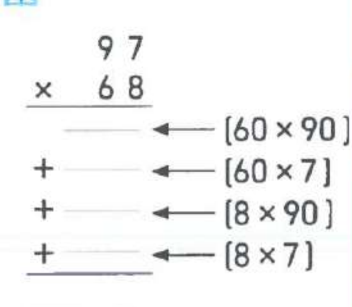


Solve using the partial products.

a.

```
     7 6
  ×  3 2
  ------
  ......  ← (30 × 70)
+ ......  ← (30 × 6)
+ ......  ← (2 × 70)
+ ......  ← (2 × 6)
  ------
  ......
```

b.



```
     9 7
  ×  6 8
  ------
  ......  ← (60 × 90)
+ ......  ← (60 × 7)
+ ......  ← (8 × 90)
+ ......  ← (8 × 7)
  ------
  ......
```

c.

```
     3 7
  ×  5 4
  ------
  ......  ← (4 × 7)
+ ......  ← (4 × 30)
+ ......  ← (50 × 7)
+ ......  ← (50 × 30)
  ------
  ......
```



....

....

....

....

....

....

....

....

....

....

....

....

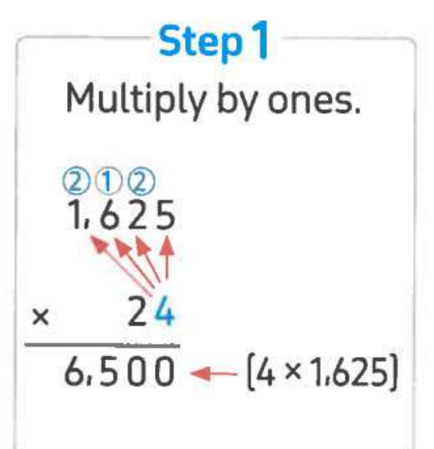
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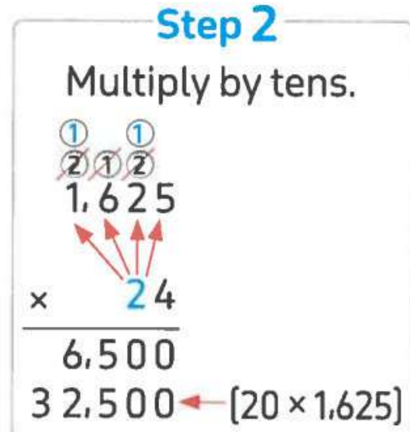
....



Concept (3-2)
Multiplying 4-Digit Number by 2-Digit Number

Lesson (5): What Is an Algorithm?





Step 3

Add the products.

$$\begin{array}{r} 1,625 \\ \times \quad 24 \\ \hline 6,500 \\ +\ 32,500 \\ \hline 39,000 \end{array}$$



<table>
<tr><th>Area Model</th><th>Partial Products Model</th><th>Standard Algorithm for Multiplication</th></tr>
<tr>
<td>

	40	5
30	1,200	150
7	280	35

</td>
<td>45
× 37
(30 × 40) = 1,200
(30 × 5) = 150
(7 × 40) = 280
(7 × 5) = 35
1,665</td>
<td>1
3
45
× 37
315
+ 1,350
1,665</td>
</tr>
</table>



Akram says that 34 × 69 will give you the same product as (34 × 70) – 34. Do you agree or disagree? Why?





Fill in the area model starting at letter A.

a.

	20	6
30	D.	C.
3	B.	A.

Final product : ________

b.

	70	8
50	D.	C.
2	B.	A.

Final product : ________



Lesson (6): Multiplying Multi-Digit Numbers:

Determine the values of the missing digits and then find the final product.

a.

```
      4
      4̸
      6 7
×     7 6
---------
    4 0 2
+ □ 6 9 □
---------
  [     ]
```

b.

```
      6
      7̸
      4 9
×     7 8
---------
    3 □ 2
+ 3 □ 3 0
---------
  [     ]
```

c.

```
    1
    2̸ 1
    5 6 3
×     2 4
---------
  2 2 5 □
+ 1 □ 2 □ 0
---------
  [       ]
```



Solve the following. First by estimate by round to the greatest place value, second use standard algorithm to find the actual product.

a.

```
   8 8 8 → ____   Estimate
×    2 9 → ____
```

b.

```
   7 2 1 → ____   Estimate
×    7 4 → ____
```

c.

```
 4, 6 2 5 → ____   Estimate
×     1 8 → ____
```



Choose the correct answer.

1. 17 × 18 ◯ 20 × 11
   A. > B. < C. =

2. What is the Ones digit in the product of 37 × 124 ?
   A. 2 B. 3 C. 6 D. 8

3. The product of 372 × 52 is close to ________
   A. 20,000 B. 15,000 C. 7,000 D. 10,000

4. 831 × 49 is close to ________
   A. 30,000 B. 32,000 C. 50,000 D. 40,000

5. The missing number in the product is ________
   A. 2,882
   B. 10,122
   C. 2,892
   D. 2,880

$$\begin{array}{r} 723 \\ \times \quad 14 \\ \hline ____ \\ +\ 7,230 \\ \hline 10,122 \end{array}$$

6. 327 × 53 ◯ 199 × 43
   A. > B. < C. =



Lesson (7): Multiplication Problems in the Real World:

Sandwiches at the diner are 24 pounds, a salad costs 3 pounds and a glass of juice is 8 pounds. A Family went to the diner and order 3 sandwiches, 2 salads and 3 glasses of juice.



a. How much will the family pay for the 3 sandwiches ? ________

b. How much will the family pay for the 2 salads ? ________

c. How much will the family pay for the 3 glasses of juice ? ________

d. How much is the total bill ? ________





Shirts in the seasons costs 185 pounds. Sweaters cost 270 pounds. Yara and her friends bought 12 shirts and 13 sweaters.

a. How much will they pay for the shirts ? ________

b. How much will they pay for the sweaters ? ________

c. How much is their bill ? ________



For Wael's baklava syrup, he needs 250 milliliters of honey, 15 mL of orange extract, and 30 mL of lemon juice per recipe. How many total milliliters of liquid ingredients will he need for the sauce if he needs to make 18 batches?



Mona uses 1,133 grams of sugar daily. How many grams does she use in 30 weeks?



Homework

1. Use standard algorithm strategy to find the result.

a. 35 × 862

b. 74 × 5,641



c. 2,504 × 16





c.

	300	60	7
20	F.	E.	D.
9	C.	B.	A.

Final product : ________

d.

	500	40	6
10	F.	E.	D.
8	C.	B.	A.

Final product : ________



Find the result using standard algorithm.

a. $\begin{array}{r} 26 \\ \times\ 33 \\ \hline \end{array}$

b. $\begin{array}{r} 78 \\ \times\ 52 \\ \hline \end{array}$

c. $\begin{array}{r} 367 \\ \times\ 29 \\ \hline \end{array}$

d. $\begin{array}{r} 546 \\ \times\ 18 \\ \hline \end{array}$



Estimate the product.

a. 416 × 72

b. 871 × 27

c. 586 × 69

d. 490 × 71

e. 817 × 34

f. 999 × 94



Mona makes freshly squeezed lemonade each day for her customers. She uses 6 lemons for each liter of lemonade. She makes 8 liters of lemonade a day. After 365 days, how many lemons has she used?

How many liters of lemonade does she make in 365 days?



For Wael's baklava syrup, he needs 250 milliliters of honey, 15 mL of orange extract, and 30 mL of lemon juice per recipe. How many total milliliters of liquid ingredients will he need for the sauce if he needs to make 18 batches?



Concept (4-1)
Models for Division

Lesson (1): Understanding Division:

28	÷	3	=	9	R1
Dividend		Divisor		Quotient	Remainder



If 18 plums are divided equally into 3 bags, then how many plums will be in each bag?



If 18 plums are packed 3 to a bag, then how many bags will there be?



Salwa has 35 books. She puts 5 books on each shelf.

How many shelves does she use ?

___



Complete the following table.

	Division Equation	Dividend	Divisor	Quotient	Remainder
a.	20 ÷ 5 = 4	____	____	____	____
b.	68 ÷ 7 = 9 R5	____	____	____	____



Lesson (2): Using the Area Model to Divide:

Divide : 1,845 ÷ 15 By using the area model

Step 1

Draw a long rectangle and write 15 on the smaller left side of the rectangle.

15	

Step 2

Try to use basic facts and pattern to get close to 1,845

15 × 1 = 15 , 15 × 10 = 150

, 15 × 100 = 1,500 (close to 1,845)

- Subtract 1,845 – 1,500 = 345

	100	
15	1,845 – 1,500 345	

Step 3

There are 345 meters left to be divided by 15

15 × 2 = 30

, 15 × 20 = 300 (close to 345)

- Subtract 345 – 300 = 45

	100	20	
15	1,845 – 1,500 345	345 – 300 45	

Step 4

Since, there are 45 meters left to be divided by 15

15 × 1 = 15 , 15 × 2 = 30 , 15 × 3 = 45 (the same number)

- Subtract : 45 – 45 = 0

	100	20	3
15	1,845 – 1,500 345	345 – 300 45	45 – 45 00

Step 5

Add the 3 numbers 100 + 20 + 3 = 123

then : 1,845 ÷ 15 = 123



Complete each set of multiplication equations

1. 3 × 5 = ________

   3 × 50 = ________

   3 × 500 = ________

2. 40 × 2 = ________

   40 × 20 = ________

   400 × 200 = ________





Model Match Choose the correct area model that represents each problem and fill in any missing numbers. Then, use the area model to answer each problem.

1. 9,234 ÷ 81 = ________

2. 3,622 ÷ 31 = ________

3. 1,050 ÷ 7 = ________

A.

	100	10	6
31	3,622 − 3,100 522	522 − 310 212	212 − 186 26

100 + 10 + 6 = 116 R26

B.

	100	50
____	1,050 − 700 350	350 − 350 0

100 + 50 = 150

C.

	____	____	____	____
81	9,234 − 8,100 1,134	1,134 − 810 324	324 − 162 162	162 − 162 0

____ + ____ + ____ + ____ = ____



Lesson (3): Using the Partial Quotients Model to Divide:

Divide : 1,845 ÷ 15

Step 1

Draw a begining model as shown.

15) 1, 8 4 5

Step 2

Think about the basic facts and patterns
to get the closest number to 1,845
15 × 1 = 15 , 15 × 10 = 150
, 15 × 100 = 1,500 (close to 1,845)

15) 1, 8 4 5
− 1, 5 0 0 | 100
3 4 5

- Write 1,500 below the dividend and 100 to the right of the vertical line as shown.
- Subtract : 1,845 – 1,500 = 345

Step 3

Look at what is remaining of the dividend (345)
we need to divide it by 15
15 × 1 = 15 , 15 × 10 = 150
, 15 × 100 = 1,500 (larger than 345)
then we can use 15 × 10 = 150

15) 1, 8 4 5
− 1, 5 0 0 | 100
3 4 5
− 1 5 0 | 10
1 9 5

- Write 150 below the remainder (345) and 10 to the right of the vertical line as shown.
- Subtract : 345 – 150 = 195

Step 4

We still need to divide 195 by 15
so, we can use 15 × 10 = 150
and follow the last step as shown.

- Subtract : 195 – 150 = 45

15) 1, 8 4 5
− 1, 5 0 0 | 100
3 4 5
− 1 5 0 | 10
1 9 5
− 1 5 0 | 10
4 5

Step 5

At last we need to divide 45 by 15
1 × 15 = 15 , 2 × 15 = 30
, 3 × 15 = 45 (the same number)

- Write 45 below 45 (the last remainder) and 3 to the right of the vertical line as shown.

1 2 3
15) 1, 8 4 5
− 1, 5 0 0 | 100
3 4 5
− 1 5 0 | 10
1 9 5
− 1 5 0 | 10
4 5
− 4 5 | 3
0





Look at the partial quotients solution for each problem. Fill in the blanks and empty boxes to complete the solution.

a.

```
       1 1 8 R13
23 ) 2, 7 2 7
   - 2, 3 0 0    |___
       4 2 7
   -   2 3 0     |___
       1 9 7
   -     6 9     |___
       1 2 8
   -     6 9     |___
         5 9
   -     4 6     |___
         1 3
```

b.

```
      [    ]
3 ) 2, 4 5 1
  - [    ]     |800
        5 1
  -     3 0    |___
        2 1
  - [    ]     |___
          0
```

c.

```
        1 3 4 R23
60 ) 8, 0 6 3
   - [    ]     |100
     2, 0 6 3
   - [    ]     |30
       2 6 3
   - [    ]     |4
         2 3
```



Lesson (4): Estimating Quotients:

Estimate using compatible numbers.

a. 5,814 ÷ 47 = ____________

Estimation : ____________

b. 6,397 ÷ 28 = ____________

Estimation : ____________

c. 1,448 ÷ 48 = ____________

Estimation : ____________

d. 7,061 ÷ 23 = ____________

Estimation : ____________



Homework

Estimate using compatible numbers.

a. 6,658 ÷ 69 = ____________

Estimation : ____________

b. 1,064 ÷ 19 = ____________

Estimation : ____________



Choose the correct answer.

1. In the equation 27 ÷ 3 = 9 , the quotient is ______

A. 27 B. 3
C. 9 D. zero

2. The divisor in the equation 48 ÷ 6 = 8 is ______

A. 48 B. 6
C. 8 D. zero

3. Dividend = Quotient × divisor + ______

A. Dividend B. Quotient
C. Divisor D. Remainder

4. 36 ÷ ______ = 9

A. 3 B. 4
C. 5 D. 6

5. ______ ÷ 5 = 9

A. 59 B. 54
C. 45 D. 95

6. 29 ÷ 4 = 7 R ______

A. zero B. 1
C. 2 D. 3

7. Zero divided by any non-zero number gives ______ as a quotient.

A. zero B. same number
C. 1 D. 2

8. Giovanni needs 36 balloons for the party but balloons come in a pack of 9. How many packs should he buy ?

A. 2 B. 3
C. 4 D. 5

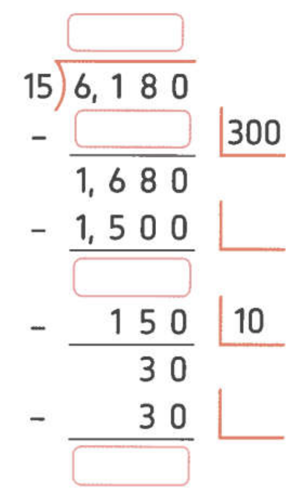


Look at the partial quotients solution for each problem. Fill in the blanks and empty boxes to complete the solution.

a.

```
      [    ]
 9 ) 4, 6 0 8
   - 4, 5 0 0   |___
     [    ]
   -     9 0    |___
         1 8
   -     1 8    |___
           0
```

b.



c.

```
         2 3 2 R [ ]
 30 ) 6, 9 7 5
    -  [    ]   |200
       [    ]
    -  [    ]   |30
       [    ]
    -  [    ]   |2
       [    ]
```

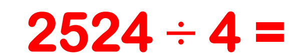




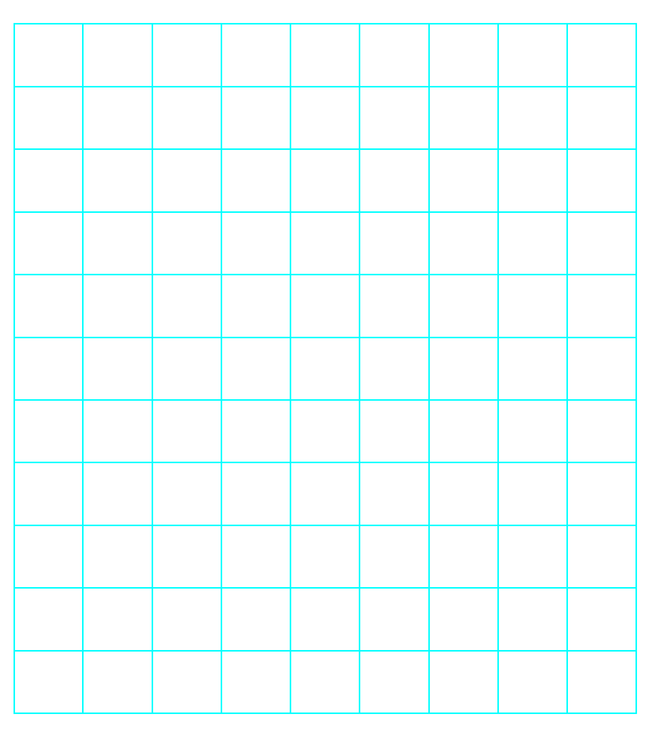
Concept (4-2)
Dividing by 2-Digit Divisors

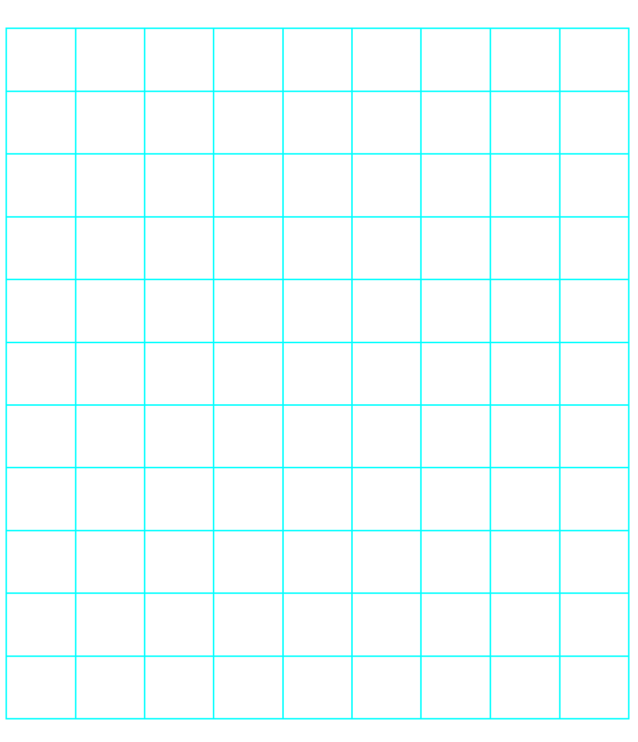
Lesson (5): Using the Standard Algorithm to Divide:

$1596 \div 3 =$



$2524 \div 4 =$

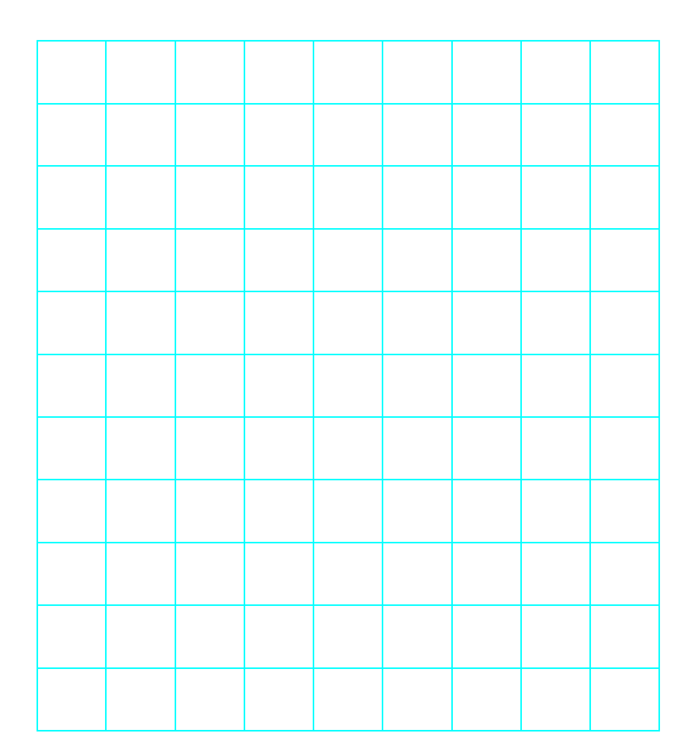




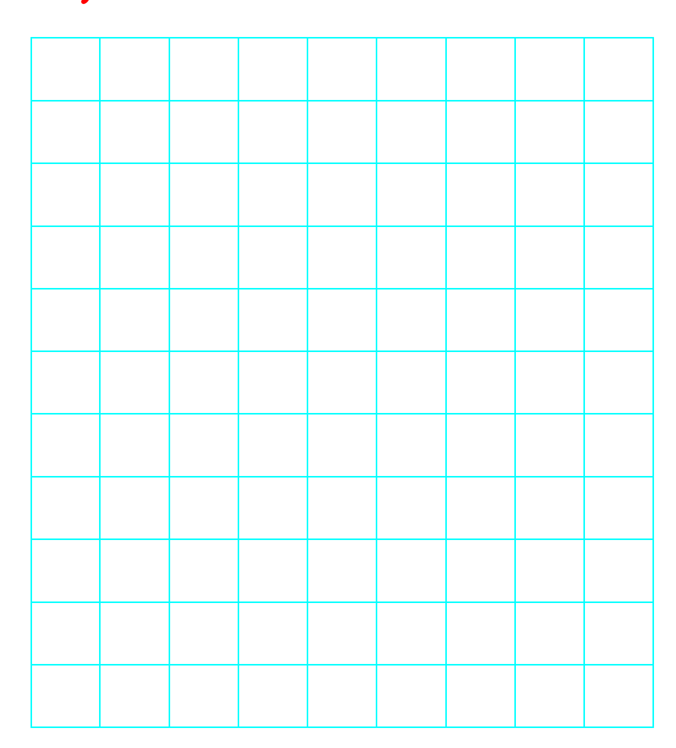


$744 \div 24 =$

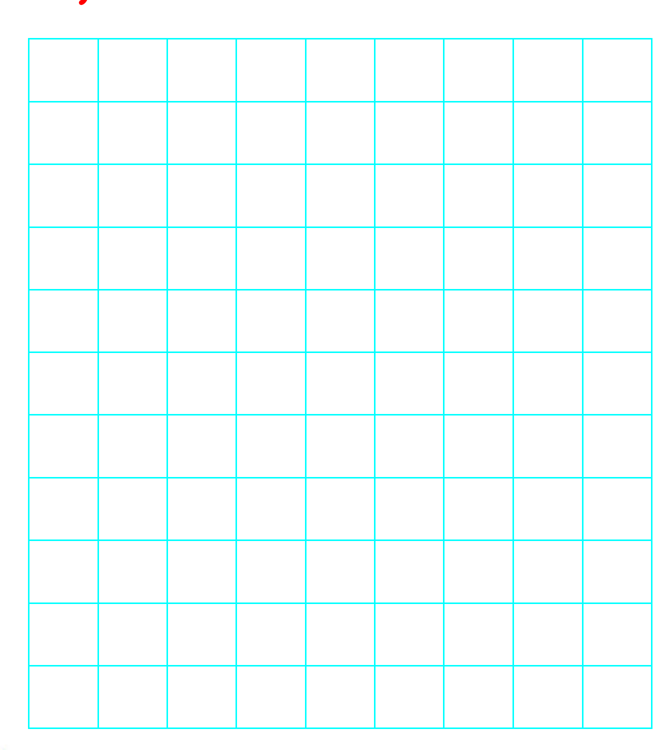
$1,910 \div 83 =$



$1,113 \div 53 =$

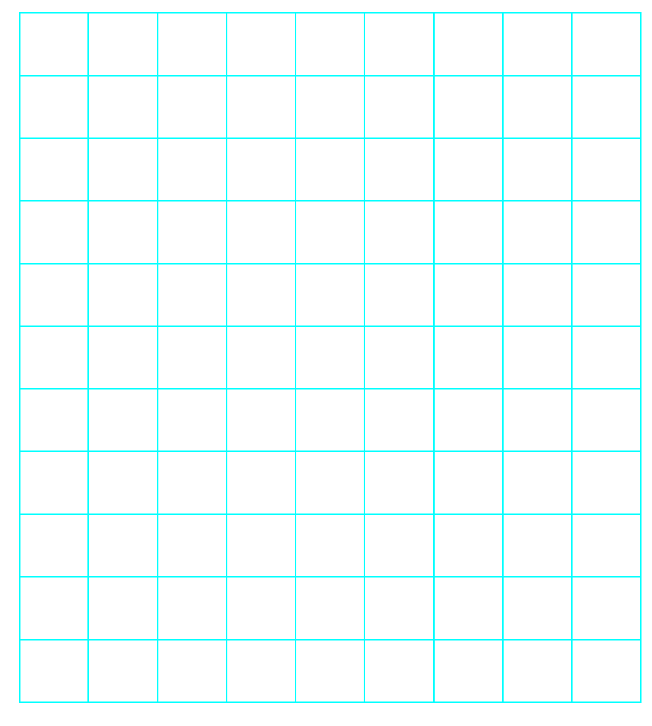


$1,077 \div 43 =$

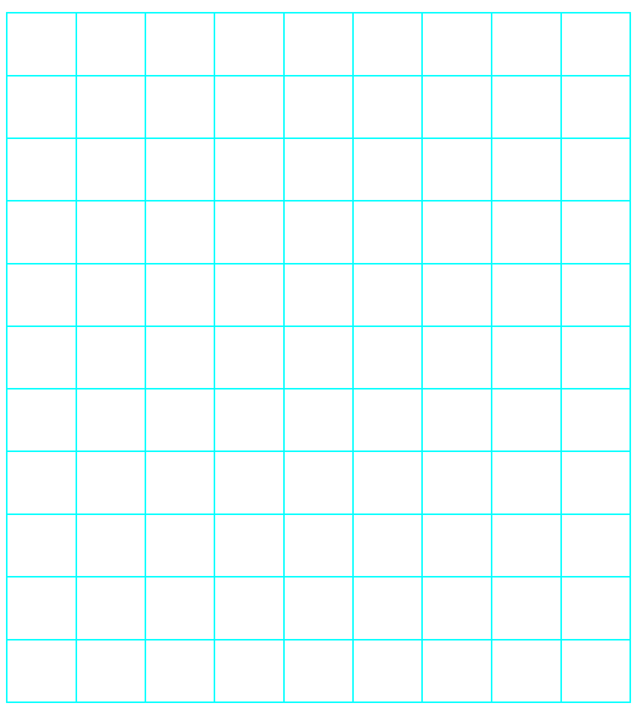




$1,475 \div 35 =$



$1,716 \div 52 =$







Lesson (6): Checking Division with Multiplication:

Choose the correct answer.

1. The division equation that matches $125 \times 36 = 4{,}500$ is ______
   - A. $4{,}500 - 125 = 36$
   - B. $125 \div 36 = 4{,}500$
   - C. $4{,}500 \div 36 = 125$
   - D. $125 + 36 = 4{,}500$

2. Which expression can be used to check the solution of the following division problem?
   $8{,}668 \div 24 = 361$ R 4
   - A. 24×361
   - B. $28 \times 8{,}668$
   - C. $361 \times 4 + 24$
   - D. $24 \times 361 + 4$



Lesson (7): Multistep Story Problems:

Amgd saved 550 pounds, Bassem saved 3 times as much as Amgd and Sameh saved 900 pounds more than Agmd. How many pounds were saved by all of them ?



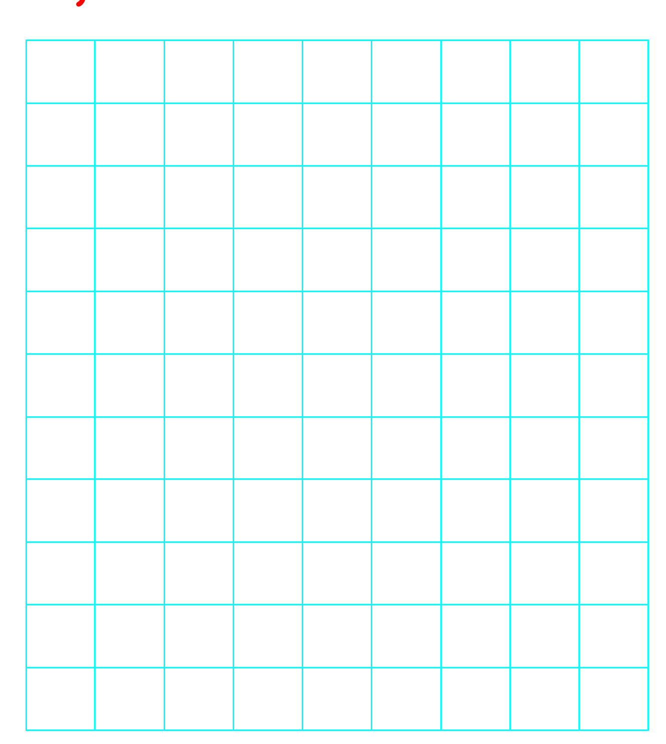
Mom baked a batch of 12 balah el sham. Two balah el sham fell on the floor. If 4 children split the remaining balah el sham equally, how many balah el sham will each child get ?



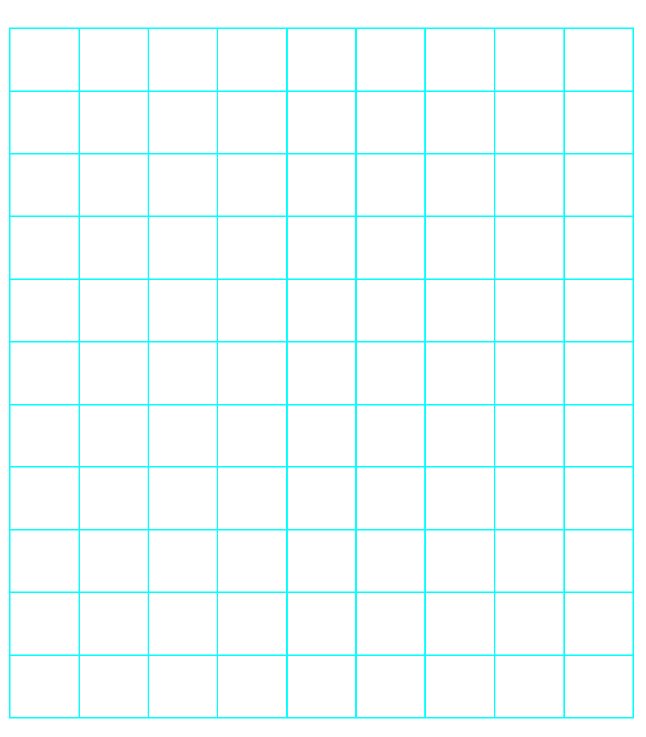


Homework

1,752 ÷ 73 =

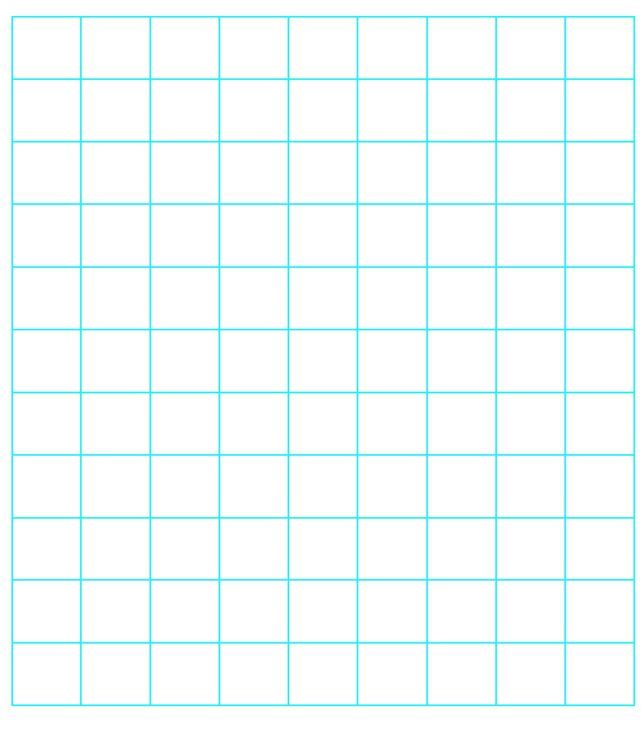


1,676 ÷ 54 =

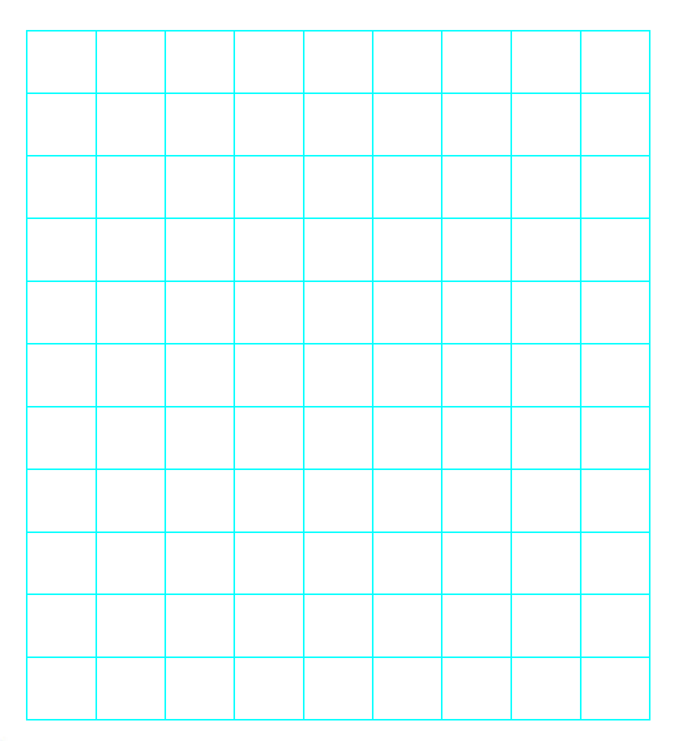




1,403 ÷ 61 =



1,935 ÷ 92 =







In one year, a textile factory used 11,650 meters of cotton, 4,950 fewer meters of silk than cotton, and 3,500 fewer meters of wool than silk. How many meters of fabric were used in all ?



Malek and his family are going on a road trip to his grandmother's house, which is 465 kilometers away. On Friday, they travel 124 km. On Saturday, they traveled 210 km. How many kilometers will they need to travel on Sunday to reach his grandmother's house?





Concept (5-1)
Multiplying Decimals

Lesson (1): Multiplying by Powers of Ten:

Missing Numbers Fill in the missing numbers in each equation.

1	10	100	1,000	10,000	100,000

1. 496 = 4 × (A) + 9 × (B) + 6
2. 6,140 = 6 × (C) + 1 × (D) + 4 × (E)
3. 20,403 = 2 × (F) + 4 × (G) + 3
4. 78,594 = 7 × (H) + 8 × (I) + 5 × (J) + 9 × (K) + 4
5. 8,032 × 1,000 = (L)



Now fill in the blanks.

1. 25 × 1,000 = ____________
2. 25 × 100 = ____________
3. 25 × 10 = ____________
4. 25 × 1 = ____________
5. 25 × 0.1 = ____________
6. 25 × 0.01 = ____________
7. 25 × 0.001 = ____________



Hoda's Stride Hoda's stride is 0.72 meters. How far, in meters, will Hoda walk after taking 1,000 paces? Use words and numbers to explain how you found your answer.

Lesson (2): Multiplying Decimals by Whole Numbers:

Evaluate:

1. 0.3×3
2. 0.3×4
3. 0.3×5
4. 2.5×3
5. 0.35×5



Complete.

a. $7.5 \times 3 =$ ____________

b. $7.5 \times 6 =$ ____________

c. $6.05 \times 5 =$ ____________

d. $0.74 \times 9 =$ ____________

e. $5.68 \times 7 =$ ____________

f. $7.2 \times 12 =$ ____________



Lesson (3): Multiplying Tenths by Tenths:

Evaluate:

1. $0.1 \times 0.1 =$ ____________
2. $0.3 \times 0.4 =$ ____________
3. $0.5 \times 0.2 =$ ____________
5. $0.9 \times 0.5 =$ ____________
4. $0.7 \times 0.8 =$ ____________
6. $0.5 \times 0.6 =$ ____________
7. $1.6 \times 0.4 =$ ____________



Lesson (4): Estimating Decimal Products:

1. 24.3×1.8 Estimate: ______
2. 8.2×11.5 Estimate: ______
3. 6.7×11.5 Estimate: ______
4. 99.6×12.7 Estimate: ______
5. 58.25×99.3 Estimate: ______
6. 649.9×0.8 Estimate: ______
7. 47.1×33.6 Estimate: ______
8. 450.321×2.2 Estimate: ______
9. 121.352×3.8 Estimate: ______



Lesson (5): Using the Area Model to Multiply Decimals:

1. $80 \times 3 = 240$

   $8 \times 30 = 240$

   $8 \times 3 =$ ______

   $0.8 \times 3 =$ ______

   $8 \times 0.3 = 2.4$

   $0.8 \times 0.3 =$ ______

   $0.08 \times 0.3 =$ ______

   $0.8 \times 0.03 =$ ______

2. $7 \times 600 = 4{,}200$

   $7 \times 60 =$ ______

   $7 \times 6 = 42$

   $7 \times 0.6 =$ ______

   $7 \times 0.06 = 0.42$

   $0.7 \times 0.6 =$ ______

   $0.7 \times 0.06 =$ ______

   $0.07 \times 0.06 =$ ______



Homework

Multiply to complete the table.

	1.	2.	3.
×	3	30	300
0.001	A. ______	G. ______	M. ______
0.01	B. ______	H. ______	N. ______
0.1	C. ______	I. ______	O. ______
1	D. ______	J. ______	P. ______
10	E. ______	K. ______	Q. ______
100	F. ______	L. ______	R. ______



Let's Try It Evaluate.

1. $4.2 \times 10 =$ ______
2. $360 \times 0.1 =$ ______
3. $7.4 \times 0.01 =$ ______
4. $1.245 \times 100 =$ ______
5. $602.1 \times 0.01 =$ ______
6. $14.14 \times 0.1 =$ ______



Find the result of each of the following.

a. $57.32 \times 0.1 =$ ______

b. $0.0823 \times 1{,}000 =$ ______

c. $18 \times 0.001 =$ ______

d. $0.524 \times 10 =$ ______

e. $5.3 \times 0.01 =$ ______

f. $62 \times 100 =$ ______



Complete.

a. $0.5 \times 5 =$ ______
b. $0.5 \times 6 =$ ______
c. $3.5 \times 3 =$ ______
d. $0.45 \times 5 =$ ______
e. $0.015 \times 9 =$ ______
f. $4.15 \times 12 =$ ______



Find each of the following.

a.
$$\begin{array}{r} 2.5 \\ \times\ \ 3 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 0.35 \\ \times\ \ 5 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 4.4 \\ \times\ \ 6 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 0.65 \\ \times\ \ 7 \\ \hline \end{array}$$



Lesson (6): Multiplying Decimals through the Hundredths Place:

Lesson (7): Multiplying Decimals through the Thousandths Place:

The digits of the product for each problem have been provided, but the decimal point is missing. Without multiplying, use your reasoning to place the decimal point correctly in the product.

1. $5.8 \times 7.4 =$ ______

   4,292

2. $32.4 \times 5.3 =$ ______

   17,172

3. $11.68 \times 2.4 =$ ______

   28,032

4. $15.4 \times 0.49 =$ ______

   7,546





Using the Standard Algorithm for Decimal Numbers Find the product for each multiplication problem using the standard algorithm.

1. $\begin{array}{r} 29.35 \\ \times\ 3.4 \\ \hline \end{array}$

2. $\begin{array}{r} 43.2 \\ \times\ 0.24 \\ \hline \end{array}$

3. $\begin{array}{r} 8.92 \\ \times\ 0.17 \\ \hline \end{array}$

4. $\begin{array}{r} 1.74 \\ \times\ 35 \\ \hline \end{array}$



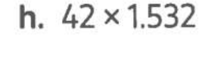
Find the product for each multiplication problem using the standard algorithm :

a. $\begin{array}{r} 2.43 \\ \times\ 6.9 \\ \hline \end{array}$

b. $\begin{array}{r} 29.35 \\ \times\ 3.4 \\ \hline \end{array}$

c. $\begin{array}{r} 47.8 \\ \times\ 5.2 \\ \hline \end{array}$

Compare the products of the following by putting (< , > or =).

a. 0.318 × 1.5		3.18 × 0.15	b. 0.75 × 0.02		7.5 × 0.2
c. 13.6 × 0.4		0.136 × 0.4	d. 7.3 × 0.28	◯	0.73 × 2.8
e. 0.342 × 1.2		3.42 × 0.12	f. 172 × 0.003		0.172 × 0.3
g. 48.2 × 3.7		4.82 × 37 	h. 42 × 1.532		4.2 × 15.32



Lesson 1 (the power of ten)

EX1: Solve all the following:

1) $90 \times 10 =$ ………………..
2) $5 \times 10{,}000 =$ ……………
3) $1{,}000 \times 60 =$ …………….
4) $10 \times 10{,}000 =$ …………….
5) $32 \times 100 =$ ……………..

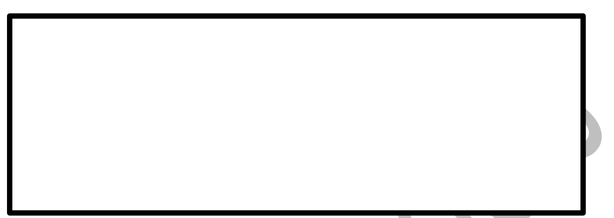
EX2: find the missing:

1) $9 \times$ ………… $= 9{,}000$
2) $1{,}000 \times 8 =$ ……………
3) $3 \times$ …………..$= 300{,}000$
4) ………… $\times 12 = 1{,}200$
5) ………… $\times 10 = 130$

Lesson 2 (using the area model to multiply)

Ex1 : solve the following using area model :

1) 321 × 21 = ………



2) 615 × 43 = ……….



3) 207 × 13 = ………

4) 310 × 66 = ……..



Lesson 3 (distributive property of multiplication)

Ex1 : complete each of the following :

1) 36×14

$= (10 \times \ldots\ldots) + (10 \times 6) + (4 \times 30) + (4 \times \ldots\ldots)$

$= \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots\ldots\ldots\ldots$

2) 45×16

$= (10 \times \ldots\ldots) + (10 \times 5) + (6 \times 40) + (6 \times \ldots\ldots)$

$= \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots\ldots\ldots$

3) 213×12

$=(10\times200)+(10\times\ldots)+(10\times3)+(2\times\ldots)+(2\times10)+(2\times\ldots)$

$=\ldots\ldots\ldots+\ldots\ldots\ldots+\ldots\ldots\ldots+\ldots\ldots+\ldots\ldots+\ldots\ldots$

$=\ldots\ldots\ldots\ldots\ldots\ldots$

4) $(30\times30)+(30\times5)+(9\times30)+(9\times5)=\ldots\ldots\ldots\ldots\ldots\ldots\ldots$

30	900	
9		45

Lesson 4 (using the partial product model to multiply)

Ex1: solve each of the following using the partial product strategy :

1)

$$\begin{array}{r} 35 \\ \times\ 13 \\ \hline \end{array}$$

$(10 \times 30) =$……………

$(10 \times 5) =$…………...

$(3 \times 30) =$…………….

$(3 \times 5) =$……………..   =…………….

2)

$$\begin{array}{r} 115 \\ \times\ 53 \\ \hline \end{array}$$

$(50\times100) =$…………

$(50\times10) =$…………..

$(50\times5) =$…………..

$(3\times100) =$…………..

$(3\times10) =$……………

$(3\times5) =$……………..   =………………

Lesson5 :(what is the algorithm)

Ex1 : solve the following :

1) $\begin{array}{r} 78 \\ \times\ 23 \\ \hline \end{array}$

…………

…………..

……………

2) $\begin{array}{r} 86 \\ \times\ 17 \\ \hline \end{array}$

…………

…………

……………

lesson 6 (multiplying multi-digit numbers)

Ex1 : solve the following :

1) 2378

$\times$ 21

………

………

………….

2) 8601

$\times$ 27

……….

………...

………….

Lesson7(multiplication problems in the real numbers)

Ex1 : Amr ate 2 pieces of pizza each day ,the price of each piece is 7 L.E . how much money will he pay after 120 days ?

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

…………………………………………………………………..

Ex2 : Alaa sells 12 pies each day ,she sells each pie for 5 L.E . how much money she will gain after 150 days ?

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

…………………………………………………………………..

Lesson 1 :

Understanding Division



1) Complete the triangle of division and multiplication facts:

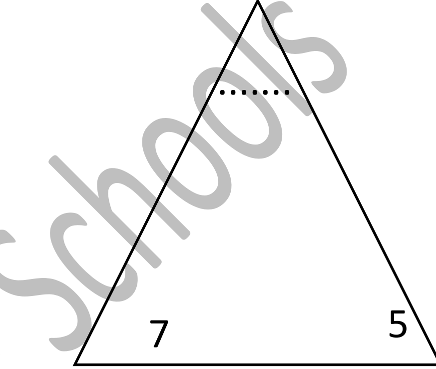


a) ....×.......=.........

.......×.......=.........

.......÷.......=.........

.......÷.......=.........

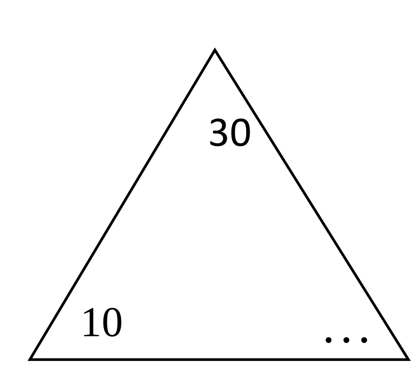


b) ....×.......=.........

.......×.......=.........

.......÷.......=.........

.......÷.......=.........



2) Complete and Find the Quotient:

a) 8 ÷ 8 = ... b) 630 ÷ 7 = ...

c) 804 ÷ 4 = ... d) 6482 ÷ 2 = ...

e) 7070 ÷ 7 = ... f) 8044 ÷ 4 = ...

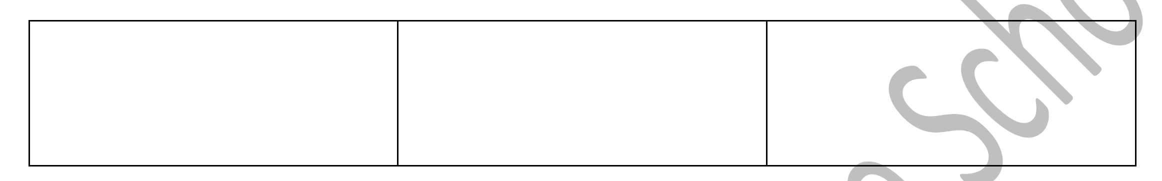
3) Abeer wants to buy books for L.E 69 .if the cost of one book is L.E .
3.How many books can she buy ?
The number of the books that
she can buy=..=.........................books.

Lesson 2 :

Using the Area model to Divide

Using the area model to divide :

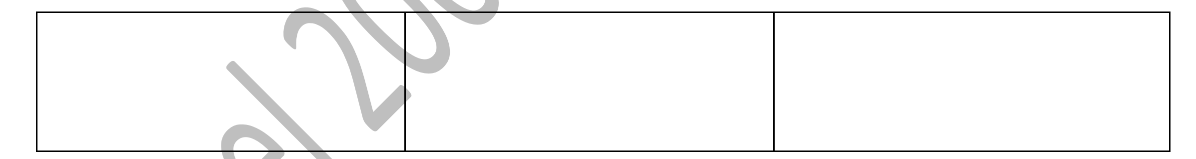

1) 2,613÷12 =…………………



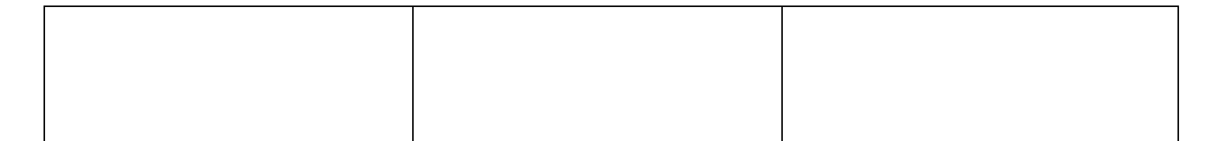
2) 2,501 ÷28 =………………………



3)6,813 ÷12= ……………………



4) 7,236÷ 35 =……………………



Lesson 3

Using the Partial Quotients model to Divide

➢ Using the partial quotients strategy to solve the problems:

1)

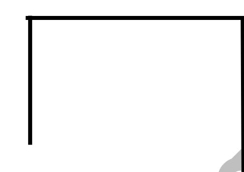
1536 ÷ 14 = ………….

2)

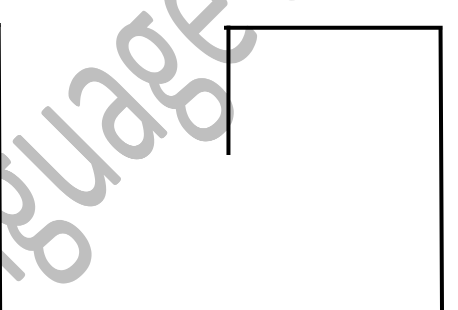
6315 ÷ 19 = ……..

3)

4608 ÷ 23 =………..







4)

937 ÷ 4= ………….

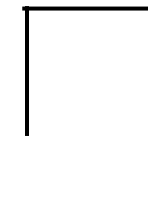
5)

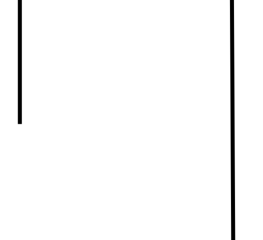
9248 ÷ 4= ……..

6)

6278 ÷ 3=………..







Lesson 4

Estimating Quotients

Estimate the solution of each problem and use the appropriate strategy to solve:

1) 1,892 ÷67 =……………………..
Estimation: ………………………….
Solution:……………………

2) 75,612 ÷56 = ………………………..
Estimation: ……………………………

Solution:………………………….

3) 8,127÷36 =……………………………
Estimation: ……………………………

Solution:……………………….

4) 7,177÷25 =……………………………
Estimation: ……………………………

Solution:……………………………….

Lesson 5

Using the Standard Algorithm to Divide

65 ÷ 15 =	97 ÷ 44 =
456 ÷ 63 =	837 ÷ 56 =
8,457 ÷32 =	9,807 ÷ 13 =

Lesson 6

Checking Division with multiplication

Solve the problem then check it with multiplication:

1) 4,523÷14=………

....

....

....

....

2) 2,984÷26=………..

....

....

....

....

3) 4256÷ 77=………..

....

....

....

....

4) 4824÷ 8=………………….

....

....

....

....

Lesson 7

Multistep story problems

solve :

1) A baker made 480 serving of basbosa for a party . if each baking tray holds 14 servings of basbosa , how many trays will be needed to hold all the basbosa ?

....
....
....
....

2) Mom baked a batch of 215 balah el sham . two balah el sham fell on the floor leaving 10 on the platter , if 13 kids split

The remaining balah el sham equally , how many balah el sham will each child get ?

....
....
....
....

3) There were 29 girls and 47 boys in a class . the teacher asked them to work in groups of 12. How many groups were there ?

....
....
....
....

Concept 1 : multiplying decimals

Lesson 1 : multiplying by power of ten

Complete

1) 3 X 3tens = ……………
2) 4 X 0.002 = ……………
3) 12 X 0.1 = …………..
4) 9 X 0.01 = ………….
5) 42 X0.01 = ……………
6) 54 X 0.001 = …………
7) 15 X 0.1 = ……….
8) 16.3 X 10 = ………..
9) 17.2 X 100 = ……….
10) 47.5 X 10 = ……….
11) 3.245 X 100 = ……………
12) 125.1 X0.01 = ………..
13) 205 X 0.01 = ………..

X	8	80	800
0.001			
0.01			
0.1			
1			
10			
100			

Lesson 2 : multiplying decimals by whole numbers.

Complete:

1) 2.4 X 5 = ……………

2) 0.32 X 4 = ……………

3) 4.02 X 6 = ……………

4) 3.16 X 4 = ……………..

5) 2.35 X 3 = ……………..

6) 0.234 X 7 = ……………..

7) 2.56 X 23 = ……………

8) 1.7 X 43 = ……………..

9) 1.37 X 4.5 = ……………

10) 3.51 X 21 = ……………..

Lesson 3 : multiplying tenths by tenths

Complete:

1)0.2 X 0.2 = ...

2)0.3 X 0.3 = ...

3)0.2 X 0.4 = ...

4)0.5 X 0.5 = ...

5)0.6 X 0.7 = ...

6)1.2 X 0.3 = ...

7)1.3 X 0.4 = ...

8)1.2 X 0.5 = ...

9) 4.2 X 0.7 = ...

10)3.5 X 0.2 = ...

Lesson 4 : estimating decimal products.

Complete as an example:

1) 24.7 X 1.9 = Etimate : 25 X 2 = 50
2) 3.5 X 11.5 = Estimate : ………. X ……. = ………
3) 99.6 X 15.3 = Estimate : ………. X ……. = ………
4) 24.3 X 5.4 = Estimate : ………. X ……. = ………
5) 249.6 X 0.5 = Estimate : ………. X ……. = ………

Food item	Actual cost L.E	Rounded cost L.E	Quantity	Equation	Running total estimated cost L.E
Milk	8.3	………..	10	…………..	………………………………..
Rice	15.3	……….	20	……………	………………………………..
Appels	18.5	…………	20	…………..	………………………………..
Oranges	9.3	…………..	30	…………	………………………………..
Onions	5.7	………..	30	………..	………………………………..
Chiken	44.4	………..	5	………..	………………………………..

Lesson 5: Using the area model to multiply decimal.

Complete

1)70 X 2 = …………..	2)90 X 2= ……..
7 X 20 = ………	9 X 20 = …………
7 X 2 = …………	9 X 2 = ………..
0.7 X 2 = …………	0.9 X 2 = ………
7 X 0.2 = ………..	9 X 0.2 = …………
0.7 X 0.2 = ……….	0.9 X 0.2 = ………..
0.07 X 0.2 = ………….	0.09 X .02 = …………
0.7 X 0.02 = ……….	0.9 X 0.02 = …………
0.07 X 0.02 = …………..	0.09 X 0.02 = ……………..

Decimal area model

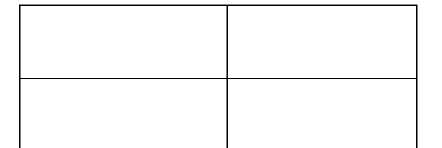
1)1.2 X 2.4 = ……………



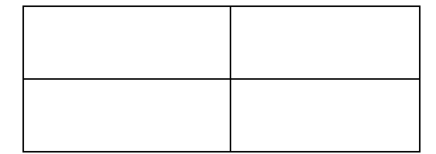
2)32.1 X 0.26 = ………….



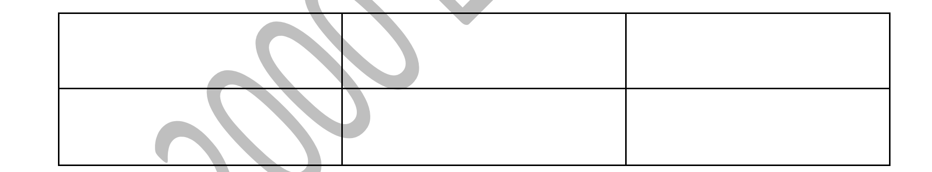
3)2.3 X 4.2 = ……………



4)8.2 X 0.16 = …………



5)2.15 X 0.35 = ……………



6)16.3 X2.6 = ………….



Lesson 6 : multiplying decimals through the hundredths place.

Find by using the standard algorithm.

1) 49.35 X 3.4 __________	2) 15.4 X 2.3 __________	3) 2.25 X 2.6 __________
4) 27.34 X 2.5 __________	5) 9.37 X 0.15 __________	6) 7.65 X 24 __________
7) 10.32 X 0.62 __________	8) 25.3 X 7.2 __________	9) 82.5 X 1.5 __________

Lesson 7 : multiplying decimals through the thousandths place.

1) 7.102 X 0.15 __________	2) 6.137 X 2.5 __________	3) 2.421 X 1.5 __________
4) 9.124 X 3.6 __________	5) 7.178 X 20 __________	6) 8.257 X 1.2 __________
7) 2.423 X 2.7 __________	8) 3.271 X 3.1 __________	9) 60.15 X 1.3 __________